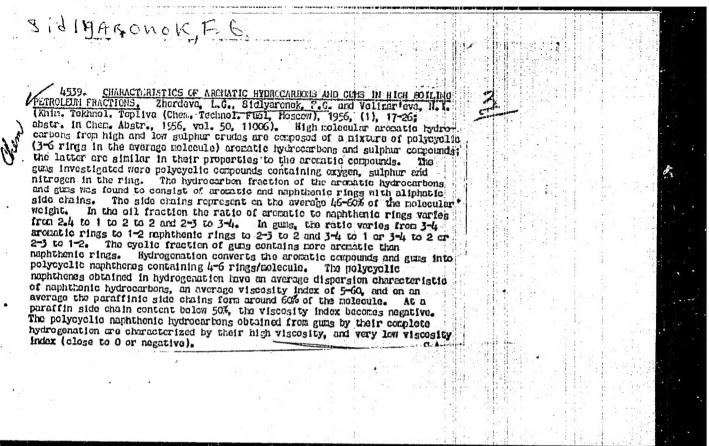SIDLYARONOK, F. G.

SIDLYARONOK, F. G. -- "Physicochemical Investigation of Extracts from the Selective Purification of Oils from Sulfurous and Low-Sulfur Petroleum from the Eastern Parts of the USSR." All-Union Sci Res Inst for Processing of Petroleum and Gas and Obtaining Synthetic Liquid Fuels (VNIINP). Moscow, 1955. (Dissertation for the Degree of Candidate of Chemical Sciences.)

SO: Knizhnaya letopis', No. 4, Moscow, 1956

SidlyAronok, F.G.

4539.   CHARACTERISTICS OF AROMATIC HYDROCARBONS AND GUMS IN HIGH BOILING PETROLEUM FRACTIONS.   Zhordava, L.G., Sidlyaronok, F.G. and Velizar'eva, N.K. (Khim. Tekhnol. Topliva (Chem. Technol. Fuel, Moscow), 1956, (1), 17-26; abstr. in Chem. Abstr., 1956, vol. 50, 11006).   High molecular aromatic hydrocarbons from high and low sulphur crudes are composed of a mixture of polycyclic (3-6 rings in the average molecule) aromatic hydrocarbons and sulphur compounds; the latter are similar in their properties to the aromatic compounds.   The gums investigated were polycyclic compounds containing oxygen, sulphur and nitrogen in the ring.   The hydrocarbon fraction of the aromatic hydrocarbons and gums was found to consist of aromatic and naphthenic rings with aliphatic side chains.   The side chains represent on the average 46-60% of the molecular weight.   In the oil fraction the ratio of aromatic to naphthenic rings varies from 2.4 to 1 to 2 to 2 and 2-3 to 3-4.   In gums, the ratio varies from 3-4 aromatic rings to 1-2 naphthenic rings to 2-3 to 2 and 3-4 to 1 or 3-4 to 2 or 2-3 to 1-2.   The cyclic fraction of gums contains more aromatic than naphthenic rings.   Hydrogenation converts the aromatic compounds and gums into polycyclic naphthenes containing 4-6 rings/molecule.   The polycyclic naphthenes obtained in hydrogenation have an average dispersion characteristic of naphthenic hydrocarbons, an average viscosity index of 5-60, and on an average the paraffinic side chains form around 60% of the molecule.   At a paraffin side chain content below 50%, the viscosity index becomes negative. The polycyclic naphthenic hydrocarbons obtained from gums by their complete hydrogenation are characterized by their high viscosity, and very low viscosity index (close to 0 or negative).   C. A.

65-12-3/9

AUTHOR: Sidlyaronok, F.G., Zherdeva, L.G. and Potanina, V.A.

TITLE: On the Problem of Structural-group Composition of Oils
         (K voprosu opredeleniya strukturno-gruppovogo sostava masel)

PERIODICAL: Khimiya i Tekhnologiya Topliva i Masel, 1957, No.12,
                                              pp. 22 - 31 (USSR)

ABSTRACT: A comparison of results of determinations of structural-
      group composition of finished oils and fractions of aromatic
      compounds, obtained by adsorption separation of extracts from
      selective refining of raw oils is described. Calculations of
      the group composition were carried out by the following methods:
      1) catalytic hydrogenation with the calculations according to
      Vlugter and Waterman; 2) catalytic hydrogenation with the
      calculations according to the formulae Van Nes and Van Westen
      (direct method); 3) without hydrogenation using the Vlug'ter,
      Waterman and Van Weston method; 4) the n-d-M method, and
      5) Dinsli and Carlton method. As a basis for comparison with
      other methods, the results obtained by the Vlug'ter, Waterman
      and Van Weston method with catalytic hydrogenation were taken.
      Data on the physico-chemical properties of oils before and
      after hydrogenation (Table 1); group compositions determined
      by the above methods (Table 2); limiting and mean deviations
Card1/3 of the values for group compositions determined by the above

On the Problem of Structural-group Composition of Oils.   65-12-3/9

methods (Table 3); physico-chemical properties of the initial
and hydrogenated polycyclic aromatic fractions, their group
compositions and deviations in the compositions determined by
the above methods (Tables 4, 5 and 6, respectively); the
comparison of group composition of the fractions determined by
the density and $M-n_D^{20}$ methods (Table 7). On the basis of the

results obtained, the following conclusions are drawn:
1) Methods of calculating group composition without hydro-
genation in a number of cases give considerable deviations in
comparison with the data obtained with hydrogenation; 2)
on calculating group composition of finished oils, the following
methods can be applied with equally good results: catalytic
hydrogenation according to Vlug'ter, Waterman and Van Weston,
the direct method of Van Nes and Van Weston, the method of
Vlug'ter and Waterman without hydrogenation and the n-d-M
method; 3) data on the determination of group composition
of polycyclic aromatic compounds obtained without hydrogenation
deviate considerably from the results obtained with the hydro-
genation. The deviation increases with increasing refractive
index of the fraction investigated; 4) the Dinsli and Carlton
Card2/3   method gives more accurate contents of aromatic rings than

On the Problem of Structural-group Composition of Oils.   65-12-3/9

other methods (without hydrogenation). The determination of
the content of other structural groups – this method gives
considerable deviations. There are 7 tables and 18 references,
8 of which are Slavic.

ASSOCIATION: VNII NP

AVAILABLE: Library of Congress
Card 3/3

ZHERDEVA, L. G. and SIDLYARONOK, F. G.

"The Structure and Properties of Aromatic Compounds Contained in the High Boiling Petroleum Fractions," p. 54

This article considers the structure and properties of aromatic compounds from two types of eastern petroleum: Tuymazy petroleum paraffinic, sulfur containing) and Emba petroleum (low paraffin, low sulfur content). It was determined that high molecular weight aromatic compounds separated from sulfur-containing petroleum consist of a mixture of polycyclic (3 - 7 cycles in an average molecule), mostly condensed aromatic hydrocarbons, and sulfur compounds similar in their properties to aromatic hydrocarbons. The calculation of the structural group composition from physicochemical constants without hydrogenation shows considerable disagreement with the composition determined on the basis of hydrogenation, and therefore cannot be used for fractions of polycyclic high molecular weight aromatic compounds.

SOV/81-59-16-58483

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 16, p 408 (USSR)

AUTHORS: Zherdeva, L.G., Sidlyaronok, F.G.

TITLE: The Structure and the Properties of Aromatic Compounds Contained in High-Boiling Petroleum Fractions

PERIODICAL: V sb.: Sostav i svoystva vysokomolekul. chasti nefti. Moscow. AN SSSR, 1958, pp 54-68

ABSTRACT: The structure and the properties of aromatic hydrocarbons (AH) of paraffin sulfurous oil (from Tuymazy) and of low-paraffin, low-sulfur oil (from Emba) were investigated. High-molecular AH from sulfurous petroleum are a mixture of polycyclic (3 - 7 cycles in the neutralized molecule), mainly condensated AH and S-compounds with similar properties. In the neutralized molecule of aromatic fractions the content of aromatic and naphthene cycles is different.

                                                        A. Nekrasov.

Card 1/1

SOV/81-59-16-58555

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 16, p 417 (USSR)

AUTHORS: Sidlyaronok, F.G., Zherdeva, L.G.

TITLE: The Chemical Composition and the Properties of Extracts From Selective Purification of Oils

PERIODICAL: Tr. Vses. n.-i. in-t po pererabotke nefti i gaza i polucheniyu iskusstv. zhidk. topliva, 1958, Nr 7, pp 34-48

ABSTRACT: The physical-chemical properties and the chemical group composition of extracts from selective purification (by phenol and steam solvents) of residual oil raw material from sulfurous paraffin-base petroleum, low-sulfurous Emba and Baku paraffin-base petroleum, and also of a distillate of a mixture of sulfurous petroleum were investigated. The investigation was carried out with the application of deresination, deparaffination, adsorption separation on SiO_2, of molecular distillation and hydrogenation and also by spectral investigation of the narrow fractions. The dependence of the chemical composition of the extracts on the character of the raw material and the methods of purification has been established.

Card 1/1

Ye. Pokrovskaya

SIDLYARENOK, F. G.

XV 1-5-15-5

Translation from: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya. 1965, Nr 15, p 61 (USSR)

AUTHORS: ...leva, ...; Sidlyarenok, F.G., Petanina, V.A.

TITLE: The Characteristic of Naphthene Hydrocarbons Contained in Extracts From Selective Purification of Oils

PERIODICAL: ...tues, n ... ... pererabotke nefti i gaza i polucheniyu iskusstv. ... topliv, ... Nr 7, pp ... - ...

ABSTRACT: ... data are ... on the characteristic of naphthene hydrocarbons which are contained ... the raw material as well as in the extract and in ... distillation ... selective purification of this raw material. A total ... ... of raw materials of various origin was investigated: residue ... ... the petroleum and from sulfurous petroleum, distillate ... ... from ... petroleum and also extracts and oils obtained ... ... various kinds of raw material. The naphthene hydrocarbons were ... ... chromatography on silicagel at the ratio to the raw material ... (... - ...):1 for extracts and (... - ...):1 for refined material ... and initial raw material. Fractions with a specific dispersion ... (... ... ... contain ... naphthene hydrocarbons. The structural-group

molecular weight. . . . . viscosity, ...
lower viscosity, indica dan . . . .
that naphthene hydrocarbons with a lower molecular weight . . . a higher number of cycles,
pass into the extract. The elementary composition of multi-ring, high-molecular
naphthene hydrocarbons can be determined with sufficient accuracy from the values of
specific refraction.

J. Rosenfel'd

SOV/81-59-16-58484

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 16, p 408 (USSR)

AUTHORS: Zherdeva, L.G., Sidlyaronok, F.G.

TITLE: The Chemical Composition and Properties of High-Boiling Fractions and Oils of Secondary Origin

PERIODICAL: Tr. Vses. n.-i. in-t po pererabotke nefti i gaza i polucheniyu iskusstv. zhidk. topliva, 1958, Nr 7, pp 221-244

ABSTRACT: The comparison of physical-chemical properties of directly distilled frac-
tions of Romashkino petroleum (b. p. 300 - 400°C and 420 - 470°C) with
fractions of catalytic cracking boiling in the intervals of 300 - 400°C;
330 - 400°C, 420 - 450°C and 450 - 500°C has shown that the fractions of
catalytic cracking have considerably higher values of density, refraction
coefficients, specific dispersion and iodine numbers. The chemical com-
position of the fractions are given. The naphthene hydrocarbons from
fractions of catalytic cracking have a lower degree of cyclicity and a
higher content of paraffin chains in the average molecule; at the same
time the degree of cyclicity and the concentration of aromatic rings in-
creases and the naphthene rings and the paraffin chains in the average mo-

Card 1/2

15.4100 1583

11.9100

33586

S/204/61/001/005/004/008
E075/E484

AUTHORS: Zherdeva, L.G., Karzhev, V.I., Sil'chenko, Ye.I.,
             Detusheva, E.P., Robozheva, Ye.V., Sidlyaronok, F.G.,
             Lebedeva, N.M.

TITLE: Isomerization of hydrocarbons from petroleum paraffin
             waxes

TEXT: Results are given of investigation into the isomerization
of solid paraffin waxes separated from high-sulphur crudes in
refineries.   98.6% of the waxes boiled between 350 and 450°C.
Their melting point was 51°C, sulphur content 0.03% and oil
content 2%.   The waxes were typical commercial waxes with
relatively high oil content.   Isomerization was conducted in a
laboratory flow apparatus under hydrogen pressure.   Molten wax at
100°C mixed with hydrogen was fed into the reactor filled with
100 ml of catalyst.   The reactor temperature ranged from 390 to
430°C.   Industrial platinum catalyst was used.   In some of the
experiments, 3% wt benzene was added to the wax to elucidate the
influence of aromatic hydrocarbons on the processes of chain
Card 1/5

33586
S/204/61/001/005/004/008
E075/E484

Isomerization of hydrocarbons ...

rupture and isomerization. Table 1 gives optimum reaction conditions together with some properties of the products. The presence in the products of isoparaffins is shown by the fact that a considerable lowering of their solidification point occurs after treatment with urea. Three fractions of the products were selectively dewaxed and clay-treated. Yields of the dewaxed oils varied from 82 to 75%, for the fractions boiling between 300 and 350°C, to 38% for the fractions boiling between 400 and 450°C. Solidification temperature for all dewaxed oils varied between -30 and -34°C. The wax separated during dewaxing contained about 90% urea adductable material and therefore is suitable for adding to the feedstock. Isomerization of wax of m.pt. 58 to 60°C gives large quantities of paraffins boiling between 350 to 450°C, which have a special interest for oxidation to fatty alcohols and acids. Oils solidifying below -40°C were produced by a two-step dewaxing, the second step consisting of urea treatment. The oils have: relatively low viscosities (3.5 to 10.1 cs at 50°C and 2.5 to 3.4 cs at 100°C) and high viscosity indices (115 to 142). Viscosity-gravity constants of the oils are below 0.77, densities lower than

Card 2/6 4

Isomerization of hydrocarbons ...

0.83 and refractive index n_D^{20} less than 1.4660. It is concluded that the oils consist of highly isomerized paraffinic hydrocarbons. The content of aromatic hydrocarbons in the oils varies from 8 to 12%. It is thought that they are mainly homologues of naphthalene. The oils obtained in the experiments in the presence of benzene have almost no resins, whereas the other oils contain 0.5 to 0.7% resins and are somewhat darker. The aromatic hydrocarbons improve oxidation stability of the oils as measured by sludge formation and acid value after testing by method VTI. More viscous oils (SAE 10) were obtained by adding 2% Acryloid 150 and polymethacrylate "D" (obtained in VNII NP) to the oils. The viscosity index is thus increased to 182 - 187. It is concluded that the isomerization constitutes a possible commercial process for the production of lubricating oils with high viscosity indices. There are 10 tables and 17 references: 5 Soviet-bloc and 12 non-Soviet-bloc. The four most recent references to English language publications read as follows: Ref.8: P. Schenk, A.B.H.Varvorn, H.I.Waterman, A.B.R.Weber. J. Inst. Petrol., v.42, 1956, 205; Ref.9: E.L.Breimer, H.I.Waterman, A.B.R.Weber. Card 3/8 4

33586
S/204/61/001/005/004/008
Isomerization of hydrocarbons ...   E075/E484

J. Inst. Petrol., v.43, 1957, 407: Ref.10: Brit. Pat. J. 66027,
28 March 1955; Ref.11: I.W.Gibson, G.M.Good, G.Holzman.
Industr. and Engng. Chem., v.37, no.16, 1959, 16.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut po
                pererabotke nefti, gaza i polucheniyu
                iskusstvennogo zhidkogo topliva VNII NP, g. Moskva
                (All Union Scientific Research Institute for Oil
                and Gas Refining and the Production of Synthetic
                Liquid Fuel VNII NP, Moscow)

SUBMITTED: July 28, 1961

Card 4/8

SIDLYARONOK, F.G.; ZHERDEVA, L.G.; ROZHDESTVENSKAYA, A.A.; DETUSHEVA,
F.P.; SLABKOVSKAYA, O.A.

Using the extracts of phenol purification as plasticizer fillers
for synthetic rubbers. Trudy VNII NP no. 9:52-67 '63.
(MIRA 17:6)

NEYMAN, M.B.; KOVARSKAYA, B.M.; YAZVIKOVA, M.P.; SIDNEV, A.I.; AKUTIN, M.S.

Destruction of condesnation resins. Part 3: Thermooxidative destruction of hardened epoxy resins. Vysokom.soed. 3 no.4:602-606
Ap '61.   (MIRA 14:4)

1. Nauchno-issledovatel'skiy institut plasticheskikh mass.
            (Epoxy resins)

L 10624-63   EPF(c)/EPR/EWP(j)/EWT(m)/BDS/ES(s)-2--AFFTC/ASD/SSD--Pr-4/
                 Ps-4/Pc-4/Pt-4--RM/MAY/WW

ACCESSION NR: AP3000688   S/0190/63/005/005/0649/0654

AUTHOR: Kovarskaya, B. M.; Akutin, M. S.; Sidnev, A. I.; Yazvikova, M. P.;
Neyman, M. B.

TITLE: Investigation of the thermooxidative decomposition of a polycarbonate

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 5, no. 5, 1963, 649-654

TOPIC TAGS: Diflon, polycarbonate, thermooxidative degradation, thermooxidative
decomposition

ABSTRACT:. The thermooxidative degradation of the Soviet polycarbonate "Diflon"
(mol. wt., 18,000) has been studied. Thermooxidation was carried out at 240 to
300C and 92 to approximately 700 mm Hg of oxygen with equipment described pre-
viously by the authors (M. B. Neyman, B. M. Kovarskaya, M. P. Yazvikova, A. I.
Sidnev, M. S. Akutin, Vy*sokomolek. soyed., 3, 602, 1961). It was found that the
initial rate of change of pressure in the system, i.e., the oxidation rate (W_0)
is directly proportional to the oxygen pressure and increases with temperature
according to the law $W_0 = a \exp(-E/RT)$, where $E = 36,500$ kcal/mol. The weight

Card   1/3

L 10624-63

ACCESSION NR: AP3000688

O

loss of Diflon at 300C and constant initial oxygen pressure increases linearly
with time after a certain initial period; the higher the initial pressure, the
greater the loss. Analysis of the degradation products revealed CO_2, CO, H_2
(traces), H_2O, CH_2O, and bis(hydroxyphenyl)propane; hydroperoxides were not
detected. It was concluded that the degradation is an autoaccelerating chain
reaction with degenerate branchings which are evidently due to hydroperoxide
decomposition. The reaction is speeded up by the presence of impurities introduced
in the starting materials. Special preliminary purification of Diflon by multiple
reprecipitation improved oxidation stability by about 50%. An oxidation mechanism
is suggested which shows that oxidation not only gives rise to gaseous products
but also alters the structure of the polymer chains in which aldehyde and hydroxy
groups accumulate. This is confirmed by the fact that the thermal stability (in
the absence of oxygen) of oxidized Diflon is far lower than that of the intitial
Diflon, owing probably to the decomposition of the aldehyde groups and to addi-
tional oxygen-containing groups which facilitate ester bond cleavage. Orig. art.
has: 10 formulas and 8 figures.

Scientific Research Institute of Plastics

Card 2/2

ACCESSION NR: AP3001579   S/0191/63/000/006/0026/0029

AUTHOR: Akutin, M. S.; Kotrelev, V. N.; Kovarskaya, B. M.; Kostryukova, T. D.;
Tarasov, V. V.; Sidnev, A. I.; Rodin, E.; Nitche, O. N.; Neyman, M. B.

TITLE: Casting of polycarbonates under pressure.

SOURCE: Plasticheskiye massy, no. 6, 1963, 26-29

TOPIC TAGS: Diflon, polycarbonate, thermal oxidation

ABSTRACT: The change in molecular weight and mechanical properties of a poly-
carbonate "Diflon" under laboratory oxidation and on pressure-casting was studied.
Polycarbonates are destroyed more rapidly by pressure casting than by thermal
oxidation. Apparently, this acceleration is combined with the presence of mechani-
cal destruction. The minimum amount of time and temperature for transforming the
polymer to the viscous-flowing state should be used in order to reduce the extent
of destruction. Orig. art. has: 9 figures, 1 table and 1 equation.

ASSOCIATION: none

SUBMITTED: 00   DATE ACQ: 01Jul63   ENCL: 00

Card 1/2

ROSHCHIN, K.S.; TSVETKOV, A.I.; SIDNEV, N.F.; TSEGE, A.S.; LIKHACHEV, V.F.;
      SHIBANOV, K.I.; LEVITINA, Kh.K.; OSTROVKINA, M.Ya.; BAYBAKOV, P.M.;
      KROL', A.I.

      Improvement in the operation of the rectifying devices of electro-
      plating tanks. Prom. energ. 15 no.11:19-20 N '60. (MIRA 14:9)
                (Electroplating) (Electric current rectifiers)

L 07001-67   EWT(d)/EWP(c)/EWP(v)/EWP(k)/EWP(1)   IJP(c)

ACC NR: AP6012157   SOURCE CODE: UR/0413/66/000/007/0073/0073

AUTHORS: Shalikhov, G. S.; Kondrashova, G. P.; Volkov, Ye. S.; Medov, B. P.;
Sidnev, E. F.; Luts'ko, S. P.; Snopov, G. A.   45

ORG: none

TITLE: Magnetic flaw detector. Class 42, No. 180391

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 7, 1966, 73

TOPIC TAGS: flaw detection, magnetic amplifier, magnetic method

ABSTRACT: This Author Certificate presents a magnetic flaw detector containing
a power transformer, electromagnets, a capacitor, and rectifiers through which
pulsed discharge of the capacitor is produced, and an automatic circuit con-
trolling the rectifier triggering. Longitudinal magnetization in the automatic
circuit is produced by electromagnets, and circular magnetization--by the gating
of the pulsed current. To check parts of any size or form with subsequent total
demagnetization, the controlled rectifiers are in the form of opposing controlled
semiconductor diodes and are connected in the transformer primary and secondary
circuits. The control electrodes of the primary diodes are connected to the
UDC: 620.179.141.1/.2

Card 1/2

L 09001-67

ACC NR: AP6012157   0

capacitor discharge circuit. The control electrodes of the secondary diodes are
connected to the automatic circuit. To establish the required strength of the
magnetization current and the reversing frequency of the demagnetization current,
the automatic circuit contains magnetic amplifiers whose outputs are connected to
the control electrodes of the transformer secondary, and the input windings—with
a potentiometer.

SUB CODE: *13, 14,* 20, 09/ SUBM DATE: 31Dec64

Card 2/2   nst

L 63876-65   EEO-2/FSS-2/EWT(1)/EWA(d)/EWA/EED-2/FCS(k)

ACCESSION NR: AP5021632

UR/0286/65/000/013/0115/0116
623.454.1/2

AUTHOR: Aleshina, M. M.; Il'in, N. A.; Sidnev, R. A.; Kharakhnin, V. K.

TITLE: Device for determining the time of combustion of pyrotechnic agents.
Class 72, No. 172653

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 13, 1965, 115-116

TOPIC TAGS: combustion, pyrotechnics

ABSTRACT: The proposed device consists of a power supply unit, an ignition unit, an
electric timer, and an electromechanical transducer with a controlled phototrans-
ducer consisting of photocells and triggers having a single stable balanced position.
To increase the stability of the measurements, a controlled light source, e.g., an
incandescent lamp with a potentiometer and a luxmeter, is used before taking the
measurements to adjust the phototransducer to respond according to the known illumi-
nation produced by the pyrotechnical agent. (see Fig. 1 of Enclosure). Orig. art.
has: 1 figure.   [PS]

ASSOCIATION: Predpriyatiye gosudarstvennogo komiteta po oboronnoy tekhnike SSSR
(Enterprise of the State Committee on Defense Technology, SSSR)
Card   1/2

L 63876-65

ACCESSION NR: AP5021632

SUBMITTED: 14May64   ENCL: 01   SUB CODE: FP, EE

NO REF SOV: 000   OTHER: 000   ATD PRESS: 4073

Card 2/3

L 63876—65

ACCESSION NR: AP5021632   ENCLOSURE: 01

Fig. 1. Device for determining
the combustion time of pyrotechnic
agents

1 - Incandescent lamp; 2 - illumin-
ator; 3 - potentiometer; 4 - volt-
meter; 5 - pyrotechnic test unit;
6 - photocell of upper photographic
attachment; 7 - photocell of lower
photographic attachment; 8 - sleeve;
9 - rod; 10 - pin.

Card   3/3

SIDNEV, R.D.

Electromechanical methods for machining parts. Mashinostroitel'
no.5:34-35 My '63.   (MIRA 16:7)

(Electric metal cutting)

SIDNEV, N.A.

Modernization of special machine tools for machining races
for angular velocity hinges of a front axle. Avt. prom. 30
no.3:40-41 Mr 64.   (MIRA 17:6)

1. Ul'yanovskiy avtomobil'nyy zavod.

L 23532-66   EWP(j)/EWT(m)   IJP(c)   RM

ACC NR: AF6007855   (A)   SOURCE CODE: UR/0138/66/000/002/0015/0018

AUTHOR: Sidnev, V. A.; Anupyl'd, O. L.; Dogadkin, B. A.; Shershnev, V. A.   39

ORG: Institute of Fine Chemical Technology im. M. V. Lomonosov, Moscow (Moskovskiy institut tonkoy khimicheskoy tekhnologii)

TITLE: Crosslinking of caoutchouc by polyhalide compounds of the aliphatic series

SOURCE: Kauchuk i rezina, no. 2, 1966, 15-18

TOPIC TAGS: rubber   heat resistance, vulcanization, organic synthetic process

ABSTRACT: The use of hexachlorethane and 1,1,1,5-tetrachloropentane as vulcanizing agents made it possible to produce heat-resistant vulcanized rubber having high physico-mechanical properties. The molecular compound of hexachloroethane with tetrachloropentane (15:85), called vulkaton (SSSR Patent no. 165300 of 23 Sept 1963), and combination of tetrachloropentane with DFG (5 and 2 parts by weight respectively) were the most efficient vulcanizing substances. Both chemical and salt crosslinkages were formed during vulcanizing caoutchouc SKS-30-1 with tetrachloropentane. Vulcanization was practically absent at temperatures ≤153C. An addition into the mixture of a small amount of DFG or an increase of temperature to 163C accelerated the vulcanization considerably. Similar results were obtained for caoutchouc of other types. Cross-

Card 1/2   UDC: 678.7:678.028:547:412.13

L 23532-66

ACC NR: AP6007855

linking in caoutchuk SKS-30-1 was not affected by 1,1.5 trichloropentane-1. (product
of the dehydrochlorization of tetrachloropentane). A. N. Nesmeyanov et al. (Usp.
khim., 25, vyp. 6, 665, 1956) showed that tetrachloroalkane had a tendency toward
dehydrochlorization while forming trichloroalkanes. Therefore, the vulcanizing of
chloroalkanes was related to the presence in them of trichloromethyl groups. The fact
that N and Cl did not link with caoutchouc during vulcanizing by tetrachloropentane
with VFG and that the trichloroalkanes did not vulcanize suggested that vulcanization
was related to the liberation of HCl from the tetrachloropentane. Orig. art. has:
3 fig.

SUB CODE: 07,11/ SUBM DATE: 28Oct64/ ORIG REF: 007/ OTH REF: 003

Card 2/2

L 56672-65   EWT(m)/EWP(j)   Pc-4   RM
ACCESSION NR: AP5017842

UR/0286765/000/011/0078/0078
678.043:547.412.74

15
0

AUTHOR: Shershnev, V. A.; Sidnev, V. A.; Dogadkin, B. A.

TITLE: A method for vulcanizing rubber. Class 39, No. 171568

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 11, 1965, 78

TOPIC TAGS: rubber vulcanization, thiourea

ABSTRACT: This Author's Certificate introduces a method for vulcanizing rubber us-
ing polyhalide compounds. Volatility and nonuniformity in mixing the vulcanizing
agent are eliminated by using a complex compound of hexachloroethane and thiourea.

ASSOCIATION: none

SUBMITTED: 19Mar64   ENCL: 00   SUB CODE: MT ,OC

NO REF SOV: 000   OTHER: 000

Card 1/1

ANATOL'YEVSKIY, Pavel Aramovich; MALOYAN, Armenak Vladimirovich;
    SHEYEROV, Osher Mendeleyevich; SIMEV, Ya.A., red.;
    KAYESHKOVA, S.M., ved. red.; BASHMAKOV, G.M., tekhn. red.

    [Technical methods and equipment in rotary drilling of water
    wells] Tekhnologiia bureniia skvazhin na vodu rotornym spo-
    sobom. Moskva, Gos. nauchno-tekhn.izd-vo neft. i gorno-
    toplivnoi lit-ry, 1962. 247 p.   (MIRA 15:2)
                                (Boring)

Dissertation: "On the Light Resistance of the Radier Lakes of Altanir and its Certain Derivatives." [...] 2 [...]

SO: Dostizhenie Nauka, May, [...] (Project [...])

SILNEVA, K.M.

25

The fastness to light of madder lakes of alizarin and some of its derivatives. V. V. Kozlov and K. M. Silneva. J. Applied Chem. U.S.S.R. 23, 331-12(1950)(Engl. translation); Zhur. Priklad. Khim. 23, 317-20(1950).—Madder lakes prepd. from pure, individual anthraquinone dyes in which the substances responsible for lake formation are attached to only one half of the ring were investigated to det. fastness to light. The following represents the diminishing fastness to light: purpurin-3-carboxylic acid > purpurin-3-sulfonic acid > purpurin > alizarin > quinizarin > anthragallol > 1,2,3,4-tetrahydroxyanthraquinone. New salts of tetrahydroxyanthraquinone and purpurin-3-carboxylic have been synthesized.   M. McMahon

1951

SIDNEVA, K. M.

Effect of metals on the dyeing of wool. K. M. Sidneva. *Tekstil. Prom.* 16, No. 4, 38–40(1956).—Dyeing of wool with acid and chrome dyes is adversely affected by the presence of metals such as Al, Cu, Fe. The change of shade is greater in the presence of Fe; dyeing is more uneven in the presence of Al. The behavior of the dye used with respect to various metals should be first detd. in the lab. by dyeing samples in the presence of metallic plates or solns. of sulfates of corresponding metals. — Elisabeth Barabash

SIDNEVA, K.M., kand.tekhn.nauk

New dyes for animal fibers. Tekst. prom. 20 no. 12:41-46
D '60.   (MIRA 13:12)
(Dyes and dyeing--Wool)   (Dyes and dyeing--Silk)

YAGUPOL'SKIY, L.M.; KRASOVITSKIY, B.M.; BLINOV, V.A.; SIDNEVA, K.M.;
PEREYASLOVA, D.G.

Properties of some fluorine-containing azo dyes. Zhur.prikl.
khim. 33 no.7:389-392 Jl '60.   (MIRA 13:7)

1. Institut organicheskoy khimii AN USSR. Khar'kovskiy
gosudarstvennyy universitet. Nauchno-issledovatel'skiy
institut organicheskikh poluproduktov i krasiteley.
(Azo dyes)

SIDNEVA, K.M., kand.tekhn.nauk; FEDOROVA, M.A., mladshiy nauchnyy sotrudnik;
          POZDNYAKOVA, A.A., inzh.

     New dyes for dyeing and printing pure silk fabrics. Tekst.prom.
     22 no.11:60-61 N '62.   (MIRA 15:11)

     1. Sotrudniki Nauchno-issledovatel' skogo instituta organicheskikh
     poluproduktov i krasiteley (NIIOPiK).
                    (Dyes and dyeing--Silk)

SIDNEVA, K.M., kand.tekhn.nauk, nauchnyy sotrudnik; YEREMINA, O.I., inzh., nauchnyy
     sotrudnik; SIMANOVSKAYA, Ye.L., inzh., nauchnyy sotrudnik

     Fiber-reactive dyes used in dyeing blended wool fabrics. Tekst.prom. no.2:
     57-61 F '63.   (MIRA 16:4)

     1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i
     krasiteley (NIOPiK).
                         (Dyes and dyeing—Wool)

SIDNEVA, K.M., kand.tekhn.nauk; FEDOROVA, M.A., mladshiy nauchnyy sotrudnik

New state standard for testing dye stability to physicochemical
action. Tekst.prom. 23 no.8:73-74 Ag '63.   (MIRA 16:9)

1. Sotrudniki Nauchno-issledovatel'skogo instituta organicheskikh
poluproduktov i krasiteley (NIOPiK).
                         (Dyes and dyeing--Testing)

SIDNEVA, K.M., kand. tekhn. nauk nauchnyy sotrudnik,; YEREMINA, O.I.,
        inzh., nauchnyy sotrudnik; BOYNO-RODZEVICH, V.P., inzh., nauchnyy
        sotrudnik; PLENTSOVA, S.A., inzh., nauchnyy sotrudnik

        Use of new types of dyes for wool dyeing. Tekst. prom. 23
        no.10:18-21 O '63.   (MIRA 17:1)

        1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov
        i krasiteley (NIOPiK).

SIDNEVA, K.M., inzh.; and [...]; PLESHKOVA, [...], [...], [...] sotrudnik; BOYR.-RODZEV. [...]., inzh., na[...]

Effect of the pH of the dyebath on the mechanical strength of dyed wool. Tekst. prom. 24 no.4:58-61 Ap '64.

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley.

SIDNEVA, N.A., nauchn. sotrudnik; tekhn. rukovoditel; FILATOVA, G.A., insh.

Effect of high temperatures in dyeing on the properties of acid and chrome dyed. Tekst. prom. 24 nr.7:61-64, Jl '64.   (MIRA 17:10)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley.

SIDNEVA, K.M., nauchnyy sotrudnik, kand.tekhn.nauk; BOYNO-RODZEVICH, V.F.,
      nauchnyy sotrudnik, inzh.; SIMANOVSKAYA, Ye.L., nauchnyy sotrudnik,
      inzh.; BEREZINA, V.A., starshiy nauchnyy sotrudnik

Wool dyeing with vat dyes in weakly-alkaline baths. Tekst.prom.
25 no.11:61-64 N '65.   (MIRA 18:12)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov
i krasiteley (for Sidneva, Boyno-Rodzevich, Simanovskaya).
2. TSentral'nyy nauchno-issledovatel'skiy institut sherstyanoy
promyshlennosti (for Berezina).

OREL, V., red.; BELOV, V., red.; GALKIN, S., red.; KRAMNOV, A.,
red.; SMIRNOV, K., red.; SHOSTAKOVSKIY, V., red.; SIDEEVA, N.,
red.

[Virgin-land planet] Planeta TSelina. Moskva, Molodaia
gvardiia, 1965. 157 p.   (MIRA 18:4)

SIDNEVA, N. YA.

USSR/Chemistry - Rubber   Nov/Dec 51

           Elastomers

"Investigation of the Role of Intermolecular Forces in the Mechanism of Highly Elastic Deformation. V. Effect of Intermolecular Interaction on the Strength of High Polymers with Well-Expressed Spatial Structure," V. Ye. Gul', N. Ya. Sidneva, B. A. Dogadkin, Chair of Rubber Phys and Chem, Moscow Inst Fine Chem Technol iment M. V. Lomonosov

"Kolloid Zhur" Vol XIII, No 6, pp 422-431

Investigated mech characteristics of vulcanizates of SKM-18, SKM-26, SKM-40 rubbers with

198T8

USSR/Chemistry - Rubber   Nov/Dec 51

          (Contd)

spatial structure developed to identical deg but different nitrile-group concn in chain mols. Within exptl limits presence of O2 did not affect mech characteristics, but strength characteristics increased with increased concn of nitrile-group, i.e., with higher intensity of intermol interaction. Proposes model for describing resistance characteristics of rubbertype high polymers and eq relating resistance to temp and rate of deformation.

198T8

LAPIN, P.I.; KOMAROV, I.A.; LEONOV, A.G.; MAZURKEVICH, F.S.; MAKAROV,
      S.N.; MARTEM'YANOV, P.B.; MOSUNOVA, D.I. [deceased]; SAKHAROV,
      I.M.; SIDNEVA, S.V.; TSITSIN, N.V., akademik, otv.red.;
      MAKAROV, S.N., red.izd-va; GUSEVA, A.P., tekhn.red.

[Trees and shrubs; results obtained in the Main Botanical
Garden of the Academy of Sciences of the U.S.S.R.] Derev'ia
i kustarniki; kratkie itogi introduktsii v Glavnom botanicheskom
sadu Akademii nauk SSSR. Moskva, Izd-vo Akad.nauk SSSR, 1959.
190 p.   (MIRA 12:10)

1. Moscow. Glavnyy botanicheskiy sad.
              (Trees)   (Shrubs)

SID'NICHENKO, V. G.

25552 Kompleksnye soyedineniya serebra a tiosupβfatdm. Izvestiya akad nauk SSSR, OTd-niye khim. Nauk, 1949, No. 4, S. 364-68. Bibpiogp: S. 368

SO: Letopis' Zhurnal'nykh Statey, Vol. 34, Moskva, 1949

SIDNIK, A.

From the Federation of the Geodetic Engineers and Geometricians
of Serbia. Geod list 18 1/3:70-72 Ja-Mr '64.

S/123/59/000/010/025/068
A004/A001

Translation from: Referativnyy zhurnal, Mashinostroyeniye, 1959, No. 10, p. 112, # 38045

AUTHOR: Sidnikhin, A.I.

TITLE: On the Effects of Thermal Cold Hardening on the Structure and Properties of Heat-Resisting Alloys of the ХН8Т (KhN80T) Type

PERIODICAL: Tr. Kuybyshevsk. aviats. in-t, 1958, No. 7, pp. 195-208

TEXT: The author investigated the effects of high rates of heating and cooling during the hardening of the ЭИ437Б (EI437B) (of the KhN80T type) alloy on its structure and properties. Specimens of a cross-section of 12 x 12 mm, 70 mm long, and 21 mm in diameter, 220 mm long, were immersed in a salt bath with a temperature of 1,280°C or water-hardened after heating at temperatures between 1,080 and 1,280°C. Repeated heatings of the hardened specimens were effected up to temperatures which were higher than the temperature of the beginning of recrystallization, with subsequent cooling in the air. The obtained investigation results of the various alloy microstructures were correlated with

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S/123/59/000/010/025/068
A004/A001

On the Effects of Thermal Cold Hardening on the Structure and Properties of
Heat-Resisting Alloys of the XH 8T (KhN80T) Type

the dislocation theory. It is shown that the heating rate during hardening
affects the alloy structure only to an insignificant extent. Heating of an
abruptly hardened alloy up to temperature lower than 1,080°C does not ensure
the conditions necessary for a shifting of the grain boundaries. Heating ex-
ceeding this temperature produces the conditions for the proceeding of a
secondary recrystallization. This temperature represents the threshold above
which processes of diffusional shifting of dislocations begin to develop in-
tensively. There are 14 figures and 13 references.

S.E.D.

Translator's note: This is the full translation of the original Russian ab-
                    stract.

Card 2/2

SIDNIKHIN, A.I. (Assist.)

"Centain Characteristics of the State of Intercrystalline Transient Zones in Metal Polycrystals (Industrial application of Investigation Results gave a double increase in the Wear Resistance of Certain Refractory Alloys)."

report presented at the 13th Scientific Technical Conference of the Kuybyshev Aviation Institute, March 1959.

SIDNIKHIN, A. I. Cand Tech Sci -- (diss) "Peculiarities of the structure
and properties of fireproof alloys of the EI437 group connected with processes
of plastic deformation and recrystallization." Sverdlovsk, 1959. 16 pp (Min
of Higher Education (and Secondary Specialized) USSR. Ural Polytechnic Inst im S. M. Kirov), 150
copies (KL, 44-59, 127)

-25-

AUTHORS: Assonov, G.I., and Shishokin, A.V.

TITLE: The Problem of the State of Intercrystalline Transition Zones in Metallic Polycrystals. Letter to the Editor

PERIODICAL: Fizika metallov i metallovedeniye, 1960, Vol 9, No 1, pp 134-135 (USSR)

ABSTRACT: The alloy Bi-17B was investigated by two methods. The first method was dissolving the alloy in a reagent of composition $CuSO_4.5H_2O$ - 130 g, H_2SO_4 - 15 ml, HCl - 500 ml. After quenching the alloy from 1030-1150 °C, the maximum rate of solution occurred in the region of the grain boundaries. The smallest amount of cold work removed the preferential solution of the material in the intercrystalline zone. Further cold work led to slower solution at the grain boundaries than the grains themselves, leaving the grain boundaries as ridges. This is explained by the hypothesis that the grain boundaries of undeformed material contain excess dislocations which have "atmospheres" around them easily dissolved. Plastic deformation will remove the excess dislocations, leaving behind them the former

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S/124/60/009/01/030/031
E021/E191

The Problem of the State of Intercrystalline Transition Zones in
Metallic Polycrystals   Letter to the Editor.

"atmospheres"   These consist of chromium and carbon
which is the reason for the boundaries being unattacked
after deformation. Specimens were also examined under
the microscope. A small amount of plastic deformation
has a marked influence on precipitation during ageing.
A small quantity of second phase is precipitated in the
slip planes and the grain boundaries (Fig 1). When
samples are heated to a temperature higher than that
required for formation of the second phase, the
dislocation "atmospheres" are destroyed. This leads to
a sharp fall in intensity of decomposition of solid
solution during ageing.

Card
2/2
There are 3 figures and 4 references, of which 1 is
English and 3 are Soviet.

SUBMITTED: March 31, 1959

SIDNIKHINA, L. I.

USSR/ Chemistry Synthesis methods

Card : 1/1 Pub. 151 - 19/35

Authors : Pudovik, A. N., and Sidnikhina, L. I.

Title : New method for the synthesis of phosphinic and thiophosphinic acid esters Part 18.-Addition of dialkylthiophosphorous acids to idene-derivatives of malonic and acetoacctic esters

Periodical : Zhur. Ob. Khim. 24, Ed. 7, 1193 - 1198, July 1954

Abstract : The addition of dialkylthiophosphorous acids to ethylidenemalonic, benzylidenemalonic, isopropylidenemalonic and ethylideneacetoacetic esters, is analyzed. The addition products obtained and their chemical properties are described. Table, showing the chemical formulas, boiling points and yield of the addition products, is included. Nine USSR references.

Institution : The V. I. Ulyanov-Lenin State University, Kazan

Submitted : January 22, 1954

SIDO, Ferenc, okleveles gepeszmernok

Ability testing of motor vehicles. Auto motor 15 no.20:11
21 0 '62.

1. Autokozlekedesi Tudomanyos Kutato Intezet tudomanyos fomundatarsa.

SJOO, K.: SIKABONI, .

"Micropaleontologic Examination of the Manganic Layer at Urkut and Olaszfalu." p. 401,
(FOLDTANI KOZLONY. BULLETIN OF THE HUNGARIAN GEOLOGICAL SOCIETY, Vol. 83. no. 10/12,
Oct./Dec. 1953, Budapest, Hungary)

SO: Monthly List of East European Accessions, LC, Vol. 3, No. 5, May 1954/Unclassified

SIDO, M.

Micropaleontological data on the Miocene sediments at Salka (Ipolyszalka),
p. 211, FOLDTANI KOZLONY, BULLETIN OF THE HUNGARIAN GEOLOGICAL SOCIETY,
(Magyar Foldtani Tarsulat) Budapest, Vol. 85, No. 2, Apr./June 1955

Ciba, ...

... r nde of T'stinnidae in Hun...r and t...'r str tigra nic si;n'ficance

r. ... (F ... ... F ... ... UNGARIAN . L... ... ...)
Vol. ..., ... 3, Ju...y Sept. ... 57
... ...t, Hung.r...

SO: ... Index of ... European Accessi ns (...) ... Vol. ..., n . 3
March ...

SIDO, Maria, dr.

Synthesis of the Senonian formations in Hungary on the ground of Foraminiferas. Foldt kozl 93 no.2:217-226 Ap-Je '63.

SIDOREMKO, I. I., PETRENKO, A. M.

Cement Industries

New method of eliminating ring formation in rotating ovens.   TSement 18 No. 4, 1952.

AUTHORS: Zavgorodnyy, N.S.; Sidochenko, I.V.   SOV-101-58-5-6/10

TITLE: A New Method for the Preparation of Raw Material Mixture to Be
Fired in Automatic Shaft Furnaces (Novyy metod prigotovleniya
syr'yevoy smesi dlya obzhiga v avtomaticheskikh shakhtnykh
pechakh)

PERIODICAL: Tsement, 1958, Nr 5. pp 25-26 (USSR)

ABSTRACT: In the Amvrosiyevskiy Cement Plant Nr 1 the productivity of the
shaft furnaces has been increased by various measures to
such an extent that the production of the raw material work-
shop could not supply the needed quantities of raw material.
To solve this problem, the moistening of the ground raw
material by normal cement slime rather than by water is re-
commended. The consumption of slime per day amounts to
600 m^3 which ensures the additional processing of 300 tons
of clinkers per day. For 4 furnaces, 33.5 tons of clinkers
must be ground per hour. The slime has a moisture content
of 48% and is mixed with ground clinkers with a moisture con-
tent of 1%. The briquets have a moisture content of 18%.
The new method ensures an adequate supply to all furnaces
and saves 8,793 tons of fuel per year. It increases the pro-
ductivity of the raw material workshop by 22.9%. The homo-

Card 1/2

SOV-101-58-5-6/10

A New Method for the Preparation of Raw Material Mixture to Be Burned in Automatic Shaft Furnaces

geneity of the briquets is also increased. The prime cost is reduced by 10 - 11%.

ASSOCIATION: Amvrosiyevskiy tsementnyy zavod (Amvrosiyevskiy Cement Plant)

1. Cement--Processing   2. Materials--Preparation   3. Furnaces --Performance

Card 2/2

VAL'BERG, G.S., ZAVGORODNIY, N.S., KOGAN, N.P., SIDOCHENKO, I.M.,
        SHVYDKIY, M.Ya.

       Enriching air with oxygen in burning clinker in shaft
       kilns. TSement 26 no.3:3-8 My-Je '60.   (MIRA 13:7)
               (Clinker brick)

ZAVGORODNIY, N.S.; MCHEDLOV-PETROSYAN, O.P.; SIDOCHENKO, I.M.; STRELKOVA, I.S.

Termographic characteristics of marls from the Amvrosiyevka deposits.
TSement 26 no.4:8-10 Jl-Ag '60.   (MIRA 13:11)
                    (Marl)

SIDOCHENKO, I.M., inzh.; ZAVGORODNIY, N.S., inzh.; ROS', N.A., inzh.

System of open-pit mining of wet marl. Gor.zhur. no.5:20-22 My
'61.   (MIRA 14:6)

1. Amvrosiyevskiy tsementnyy kombinat, Amvrosiyevka, Stalinskoy
oblasti.
          (Strip mining--Cold weather conditions) (Marl)

SIDOCHENKO, I.M.; ZAVGORODNIY, N.S.

Producing "700" and "800" types of portland cement. TSement 27
no.3:19-20 My-Je '61.   (MIRA 14:7)
                        (Portland cement)

SIDOCHENKO, I.M.; ZAVGORODNIY, N.S.; REYGAUZEN, L.V.

Some defects in design. TSement 27 no.4:13-14 Jl-Ag '61.
(MIRA 14:8)

(Cement plants)

ZAVGORODNIY, N.S., inzh.; SIDOCHENKO, I.M., inzh.

Production of high-strength cement at the Amvrosievka cement
combine. Nauch. soob. NIITSementa no.12:24-27 '61. (MIRA 15:7)

1. Amvrosiyevskiy tsementnyy kombinat.
                    (Amvrosievka—Cement)

ZAVGORODNIY, N.S.; MCHEDLOV-PETROSYAN, O.P.; SIDOCHENKO, I.M.;
    STRELKOVA, I.S.

    Determination of slags and gypsum in cements by the thermographic
    method. TSement 28 no.2:13-15 Mr-Ap '62.   (MIRA 15:8)
                              (Cement)

SIDOCHENKO, I.M., inzh.; ZAVGORODNIY, N.S., inzh.; MASHKOVICH, M.I., inzh.;
PEYNGAUZEN, L.V., inzh.; RYVKIN, V.D., inzh.; SHTEYNMAN, Ye.Ye.,
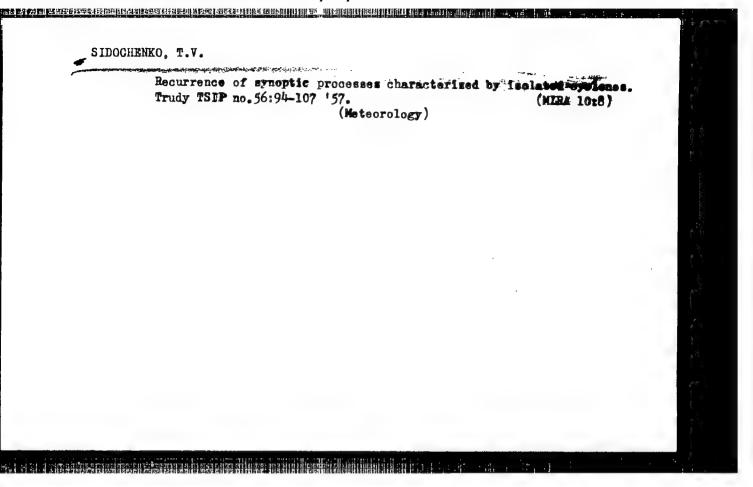inzh.

Introduce the system of the automatic control of clinker firing.
TSement 30 no. 2:15-17 Mr-Ap '64.   (MIRA 17:5)

1. Amvrosiyevskiy tsementnyy kombinat i LSPNU tresta "Sevzapmon-
tazhavtomatika".

//

L 13600-66   EWT(m)
ACC NR: AP6001016   (A)   SOURCE CODE: UR/0286/65/000/022/0101/0101

AUTHORS: Isidorov, V. V.; Akunov, V. I.; Dubinskiy, M. G.; Zavadskiy, G. V.; Insmakov, Yu. T.; Lur'ye, N. Yu.; Myasin, N. I.; Nosenko, N. Ye.; Plevako, A. N.; Ryuin, V. N.; Sidochenko, I. M.; Sominskiy, D. S.; Titov, P. P.; Khalov, G. G.; Shchevel', A. S.; Zavgorodniy, N. S.

ORG: none

TITLE: A reactor for combined pulverizing and burning of a material, such as cement, in a high temperature gas stream. Class 80, No. 145469

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 22, 1965, 101

TOPIC TAGS: cement, thermal reactor

ABSTRACT: This Author Certificate presents a reactor for combined pulverizing and burning of a material, such as cement, in a high temperature gas stream. To provide automatic regulation of the burning and calcification time for the material in the reactor, the latter is made in the shape of a flat, lenticular chamber. Nozzles of the combustion chambers are built into the peripheral circle of the lenticular chamber and at an angle to its radii. An opening in the center of the chamber bottom is used to discharge the finished burned product.

SUB CODE: 18, 13/   SUBM DATE: 24May61

Card 1/1

KHROMOV, M.I., kand.geograf.nauk; CHISTYAKOVA, Ye.A.

Weather forecast for the U.S.S.R. in April 1965. Meteor. i gidrol.
no.4:65-68 Ap '65.   (MIRA 18:4)

1. TSentral'nyy institut prognozov.

SIDOCHENKO, T.V.

Recurrence of synoptic processes characterized by isolated cyclones.
Trudy TSIP no.56:94-107 '57.   (MIRA 10:8)
(Meteorology)

3 (7)

AUTHORS: Ped', D. A., Sidochenko, T. V.   SOV/50-59-9-3/16

TITLE: On the Cause of Variations in Intensity in the Zonal Circula-
               tion of the Atmosphere

PERIODICAL: Meteorologiya i gidrologiya, 1959, Nr 9, pp 20 - 24 (USSR)

ABSTRACT: The results of the analysis of intensity variations in the
               zonal circulation in the atmosphere, as well as the data ex-
               plaining these variations in a certain degree are put forward
               here. In the investigation of the circulation in the atmosphere,
               the indices, the calculation method of which is indicated in
               the papers (Refs 6,9), were determined here on the basis of the
               data of 1938-1957. Besides, the values indicated in the paper
               (Ref 7) were used. Table 1 shows the mean annual intensities
               of zonal circulation in the atmosphere for 20 years. The low-
               est circulation index was recorded in 1938, the highest in
               1955. The analysis of the connection between the intensity of
               the zonal atmospheric circulation of the previous and subsequent
               years and months is put forward. As the atmospheric circula-
               tion on the whole terrestrial globe is not considered, these
               connections are approximated. It is shown that the intensity
Card 1/3   of zonal circulation of the respective month depends - though

On the Cause of Variations in Intensity in the   SOV/50-59-9-3/16
Zonal Circulation of the Atmosphere

not to a large extent - on the circulation of the preceding
months. It seems that this connection depends on both the
inertia and the continuity of the processes. It is attempted
here to find a connection between the zonal circulation in the
atmosphere and the solar activity. Figure 1 shows the integral
curves for the mean annual intensities of zonal circulation
in the atmosphere and the integral curves of the mean annual
values of the number of R. Vol'f. The number of R. Vol'f is
an index of the relative number of sun spots indicating the
intensity of the field strength of ultraviolet radiation of
the active sun areas. Figure 1 shows a good agreement in the
course of the two curves. The synchronous and asynchronous
correlation connections were determined in order to establish
the good agreement of this course. It was found that there is
a very close synchronous connection between the annual values
of the intensity of zonal circulation and the numbers of Vol'f.
Also the asynchronous connections show high values.- The high
correlation coefficients permit the regression equations for
determining the integral zonal circulation to be built up ac-
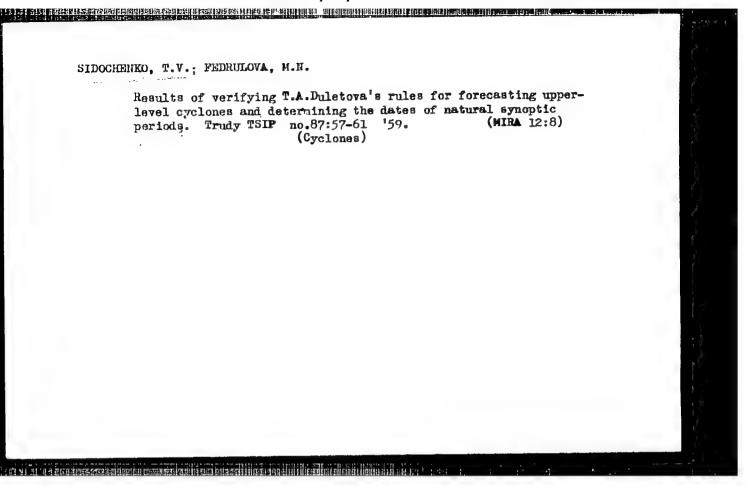cording to the integral data of solar activity, which is also

Card 2/3

On the Cause of Variations in Intensity in the   SOV/50-59-9-3/16
Zonal Circulation of the Atmosphere

shown here.- The conclusions obtained for the connection of
the intensity of zonal circulation of the atmosphere with the
solar activity is apparently peculiar to the circulation of
the atmosphere on the whole terrestrial globe, at least to that
in the whole troposphere. In default of data, this cannot be
proved at present. Table 4 shows that there is also a close
connection between the circulation at different levels of the
troposphere. This shows that nearly the whole troposphere re-
acts in the same way on the influence of solar activity.- In
conclusion it is said that - although the results put forward
here have a preliminary character - they show that the mean
annual variations of the intensity of zonal circulation in
the atmosphere are determined, to a high degree, by the mean
annual variations of solar activity. There are 1 figure,
4 tables, and 15 Soviet references.

Card 3/3

SIDOCHENKO, T.V.; FEDRULOVA, M.N.

Results of verifying T.A.Duletova's rules for forecasting upper-level cyclones and determining the dates of natural synoptic periods. Trudy TSIP no.87:57-61 '59. (MIRA 12:8)
(Cyclones)

SIDOCHENKO, T.V.

Synoptic climatological study and some prognostic indications of temperature conditions and atmospheric processes in June in the European part of the U.S.S.R. and Western Siberia.   Trudy
TSIP no.89:23-40 '60.   (MIRA 14:3)
(Weather forecasting)

PED', D.A.; SIDOCHENKO, T.V.

Relationship between the mean monthly temperature anomaly and
atmospheric circulation during the preceding months. Trudy
TSIP no.89:127-149 '60.   (MIRA 14:3)
                    (Weather forecasting)

PED', D.A.; SIDOCHENKO. T.V.

Method for seasonal forecasting of the temperature anomaly of air.
Trudy TSIP no.109:15-40 '61.   (MIRA 14:5)
(Weather forecasting)

PED', D.A.; SIDOCHENKO, T.V.

More accurate forecasts of the air temperature anomaly in a
season. Trudy TSIP 103:31-38 '62.   (MIRA 15:7)
    (Weather forecasting) (Atmospheric temperature)

.

SIDOCHENKO, T.V.

Reliability of basic atmospheric processes used in the prepara-
tion of weather forecasts for June. TRUDY TSIP no.115:43-48
'62.   (MIRA 16:6)
                    (Weather forecasting)

S/169/62/000/008/048/090
E073/E535

AUTHORS: Ped', D.A. and Sidochenko, T.V.

TITLE: On the forecasting of anomalies of the air tempera-
ture and the quantity of precipitations for a month

PERIODICAL: Referativnyy zhurnal, Geofizika, no.8, 1962, 52-53,
abstract 8B356 (Tr. Tsentr. in-ta prognozov,
1962, no.116, 41-64)

TEXT: The method of forecasting anomalies of the average
monthly air temperature in Western Siberia is presented, which is
based on calculating the intensity of the zonal circulation of
the atmosphere of the previous months and a recommendation is made
for forecasting the monthly quantity of precipitates in the
European territory of the USSR and Western Siberia. Data were
used on the anomalies on the mean monthly air temperature during
1938-1958 and the quantity of rainfall during 1891 to 1954 in
stations uniformly distributed throughout the European territory
of the Soviet Union and Western Siberia, as well as indices of
the zonal circulation of the atmosphere determined according to
AT-500 charts for a characteristic region 40°-72° N lat. and

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20° W long. to 80° E long. during 1938-1958. In obtaining
asynchronous relations for forecasting the anomalies of the
temperature with various advance prediction times, earlier
obtained relations are applied (see RZhGfiz, 1961, 9B240). The
asynchronous relations between the intensity of the zonal circula-
tion of the atmosphere (I_{W-E}) above a characteristic region in
the preceding months and the anomalies of the mean monthly air
temperature (Δt) and the succeeding months are plotted graphically
for each month and station. The degree of inter-relation was
determined by means of a parameter ρ (on the graphs Δt_i, I_{W-E}
a straight line was drawn corresponding to ρ_{max}). The monthly
ρ values are given for each of the 12 selected stations in
Western Siberia with a prediction time of 20 days, 10 days and
zero days. Analytically the relations are expressed by the
formula $\Delta t_i = -a_i I_{W-E} + b_i$ (where a_i and b_i are some
statistically determined parameters for the given station and
month as a function of the prediction time), which permits
determining the anomaly of the average monthly air temperature
with various prediction times for various values of the index of

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the zonal circulation of the atmosphere. During one year the
forecasts with a prediction time of 20, 10 and zero days had a
reliability as regards : of 0.43, 0.40 and 0.41. The quality of
the forecasting can be somewhat improved by selecting relations
which have a high degree of reliability. ·An example is given of
the compilation of forecasts of anomalies of the average monthly ·
air temperature with various prediction times for Western Siberia.
From the anomalies of the monthly average air temperature during
1891 to 1958, the asynchronous nature in the appearance of an
anomaly of one sign or another is investigated for the European
territory of the Soviet Union (from the data of 22 stations), and
for Western Siberia (from the data of 12 stations). Coèfficients
of correlation and parameters of the equations of regression
between the number of stations with anomalies of the same sign in
the mean monthly air temperature of the European territory of the
Soviet Union and Western Siberia are obtained. The highest values
of the correlation coefficient (r = 0.4-0.7) were observed for the
cold half of the year, the lowest for the warm part of the year.
The regression equations, by means of which the number of stations
with the corresponding anomalies in Western Siberia are determined
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from the data of the stations of the European part of the Soviet
Union, are of the type $n_{WS} = kn_E + \ell$, where n_{WS} and n_E are,
respectively, the number of stations with anomalies in the mean
monthly air temperature of the same sign in Western Siberia and
in the European territory of the Soviet Union, k and ℓ - parameters
determined by statistical means. Working out of direct relations
between the intensity of the zonal or meridional circulation and
precipitations does not yield positive results. Determination of
the anomalies of the average monthly quantity of precipitations
was carried out by applying the anticipated anomaly in the mean
monthly air temperature. Synchronous relations were obtained
between the predominant graduated values of the rainfall (below
the specified value, corresponding to the specified value and
above the specified value) and the sign Δt. The sequence of
compiling forecasts for rainfalls for a month is described. The
monthly probability of appearance of precipitates of a given
graduation in the case of differing anomalies of the average
monthly air temperature in a number of stations in the European
territory of the Soviet Union and in Western Siberia are given.
Improvement of the here presented method of forecasting of
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anomalies of the average monthly air temperature and the quantity
of precipitates can be carried out by taking into consideration
the circulation conditions throughout the entire northern
hemisphere, the influence of the underlying surface and other
factors.
20 references.

[Abstractor's note: Complete translation.]

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BATYAYEVA, T.F., kand.geograf.nauk (Moskva); SIDOCHENKO, T.V., kand.
geograf.nauk (Moskva)

Winter weather of 1962-1963 in the northern hemisphere.
Priroda 52 no.4:124-127 '63.   (MIRA 16:4)
                              (Winter)

BATYAYEVA, T.F.; SIDOCHENKO, T.V.

"Capricious" spring of 1963. Priroda 52 no.7:124-126 Jl '63.
(MIRA 16:8)

1. TSentral'nyy institut prognozov, Moskva.
(Spring)

BATYAYEVA, T.F., kand.geograf.nauk (Moskva); SIDOCHENKO, T.V., kand.geograf.nauk
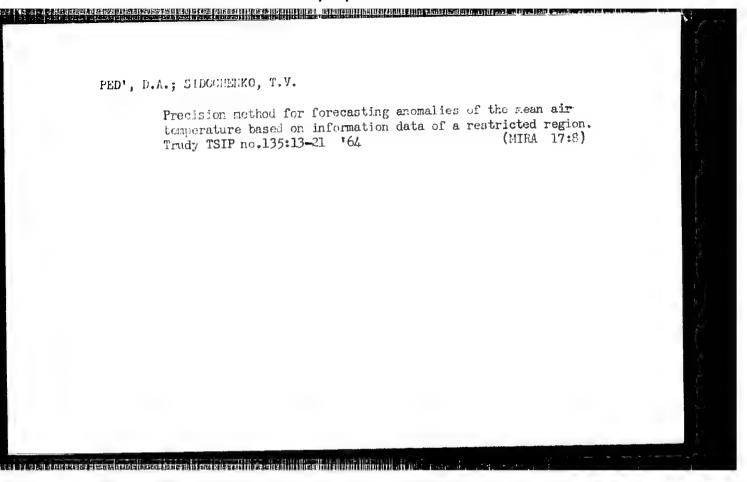(Moskva)

Autumn of 1963. Priroda 53 no.1:125-127 '64.　　　　　(MIRA 17:2)

BATYAYEVA, T.F., kand.geograf.nauk; SIDOCHENKO, T.V., kand.geograf.nauk

Weather in the winter of 1963-1964. Priroda 53 no.4:124-125 '64.

(MIRA 17:4)

1. TSentral'nyy institut prognozov, Moskva.

PED', D.A.; SIDOCHENKO, T.V.

Precision method for forecasting anomalies of the mean air
temperature based on information data of a restricted region.
Trudy TSIP no.135:13-21 '64   (MIRA 17:8)

BATYAYEVA, T.F.; SIDOCHENKO, T.V.

Summer of 1964 in Europe and Asia. Priroda 53 no.10:
125-127 '64.   (MIRA 17:11)
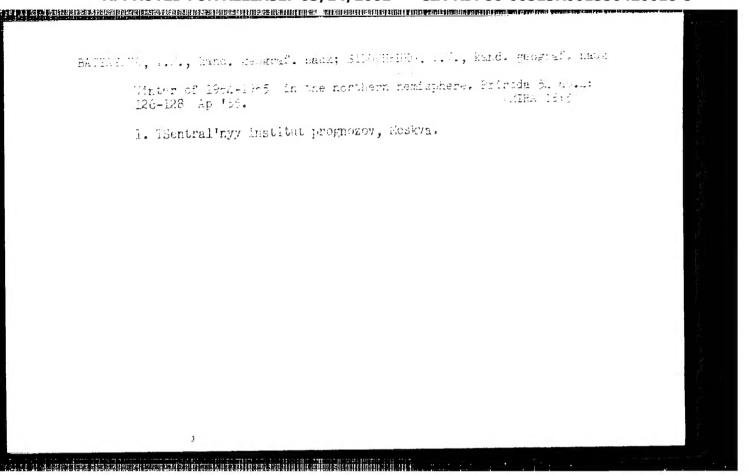
1. TSentral'nyy institut prognozov, Moskva.

SIDOCHENKO, T.V., kand. geograf. nauk; BULINSKAYA, N.A., kand. fiz.-mat. nauk

Weather forecast for the U.S.S.R. in November 1964. Meteor. i gidrol. no.11:61-64 N '64.   (MIRA 17:12)

1. TSentral'nyy institut prognozov.

BATINIM, ..., kand. geograf. nauk; SIDORENKO, ..., kand. geograf. nauk

Winter of 1954-1955 in the northern hemisphere. Priroda 5. no..:
126-128 Ap '55.   (MIRA 15:6

1. TSentral'nyy institut prognozov, Moskva.

BATYAYEVA, T.F., kand.geograf.nauk; SIDOCHENKO, T.V., kand.geograf.nauk

Spring of 1965 in the Northern Hemisphere. Priroda 54 no.7:125-128
Jl '65.   (MIRA 18:7)

1. TSentral'nyy institut prognozov, Moskva.

BATYAYEVA, T.F., kand.geograf.nauk; SIDOCHENKO, T.V., kand.geograf.nauk

Abnormal summer; survey of summer weather in the northern hemisphere.
Priroda 54 no.10:126-128 '65.   (MIRA 18:10)

1. TSentral'nyy institut prognozov, Moskva.